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Gregory J. Hewlett

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EXAMINER

PERVAN, MICHAEL

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Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hewlett et al (US 6,008,785; as submitted by applicant).

In regards to claim 1, Hewlett discloses (Figure 9b) a method of creating an image, the method comprising: operating a display to create a sequence of bit display periods, said bit display periods comprising:

at least one conflict bit period (col. 9, lines 42; since there is a fix for conflict bits (reset conflicts), then they must exist) skewed with respect to other said bit display periods (Figure 9b and col. 9, lines 53-62; as can be seen from the drawing, segments n+1 and n+2 have been skewed while segment n has not); and

at least two compensating bit periods (segments n and n+2) having a bit period such that an error created by said skewing occurs during said compensating bits (col. 9, line 63-col. 10, line 1; both compensating bit periods (segments n and n+2) have errors (increase display times) caused by the skewing).

In regards to claim 2, Hewlett discloses (Figures 9a and 9b) the method of claim 1 in which said bit period of a first of said at least two compensating bit periods is shortened (Figures 9a and 9b; as can be seen from the drawings, first compensating bit

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period (segment  $n$ ) is shortened) and said bit period of a second of said at least two compensating bit periods is lengthened (Figures 9a and 9b; as can be seen from the drawings, second compensating bit period (segment  $n+2$ ) is lengthened).

In regards to claim 3, Hewlett discloses the method of claim 1 in which said bit period of a first of said at least two compensating bit periods is lengthened (Figures 9a and 9b; as can be seen from the drawings, first compensating bit period (segment  $n$ ) is lengthened) and said bit period of a second of said at least two compensating bit periods is shortened (Figures 9a and 9b; as can be seen from the drawings, first compensating bit period (segment  $n+2$ ) is shortened).

In regards to claim 4, Hewlett discloses the method of claim 1 in which a first and a second of said at least two compensating bit periods are segments of the same image bit (col. 10, lines 1-3; since the compensating bits (segments  $n$  and  $n+2$ ) can be of the same bit-plane, they would be part of the same image bit).

In regards to claim 5, Hewlett discloses the method of claim 1 in which said bit periods of a first and a second of said at least two compensating bit periods are temporally adjacent said at least one conflict bit period (Figure 9b; as can be seen from the drawing, the compensating bit periods (segments  $n$  and  $n+2$ ) are temporally adjacent to the conflict bit period (segment  $n+1$ )).

In regards to claim 6, Hewlett discloses the method of claim 1 in which said bit periods of a first and a second of said at least two compensating bit periods are temporally adjacent a combination of said at least one conflict bit period and at least one other bit period (Figure 9b; as can be seen from the drawing, there could exist bit

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periods (segments  $n-1$  and  $n+3$ ) prior to first compensating bit period (segment  $n$ ) and after second compensating bit period (segment  $n+2$ ), therefore compensating bit periods ( $n$  and  $n+2$ ) would be temporally adjacent to a combination of a conflict bit period (segment  $n+1$ ) and one other bit period (segments  $n-1$  and  $n+3$ )).

In regards to claim 7, Hewlett discloses the method of claim 1 in which said bit period of a first of said at least two compensating bit periods occurs prior to said at least one conflict bit period (Figure 9b; as can be seen from the drawing, the compensating bit period (segment  $n$ ) is before the conflicting bit period (segment  $n$ )) and a second of said at least two compensating bit periods occurs following said at least one conflict bit period (Figure 9b; as can be seen from the drawing, the compensating bit period (segment  $n+2$ ) is after conflicting bit period (segment  $n+1$ )).

In regards to claim 8, Hewlett discloses the method of claim 7 in which said first compensating bit period corresponds to a first image bit and a second compensating bit period corresponds to a second image bit (col. 10, lines 3-5; since compensating bit periods (segments  $n$  and  $n+2$ ) can be of different bit planes, then the first compensating bit period (segment  $n$ ) would correspond to a first image bit and the second compensating bit period (segment  $n+2$ ) would correspond to a second image bit).

In regards to claim 9, Hewlett discloses the method of claim 8 comprising displaying another bit segment corresponding to said first image bit and another bit segment corresponding to said second image bit in said sequence of bit display periods such that said two another bit segments compensate for said error created by said skewing (col. 10, lines 3-10; there is a counterskew, which compensates for the error

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created by the skew, that is accomplished skewing the boundaries of intervening segments if there are any).

In regards to claim 10, Hewlett discloses the method of claim 9 displaying at least one other image bit between said another bit segment corresponding to said first image bit and said another bit corresponding to said second image bit (col. 10, lines 3-10; since there can be more than one intervening segment between compensating bit periods (segments  $n$  and  $n+2$ ), there could be another bit segment for first image bit followed by one other bit image followed by another bit segment for second image bit).

In regards to claim 11, Hewlett discloses a display comprising:

an image data source (Data In) providing a plurality of image data bits; and

a display device (10) comprising at least one display element (16) operable to form an image pixel corresponding to a plurality of image data bits over a sequence of bit display periods, said bit display periods comprising:

at least one conflict bit period (col. 9, lines 42; since there is a fix for conflict bits (reset conflicts), then they must exist) skewed with respect to other said bit display periods (Figure 9b and col. 9, lines 53-62; as can be seen from the drawing, segments  $n+1$  and  $n+2$  have been skewed while segment  $n$  has not); and

at least two compensating bit periods (segments  $n$  and  $n+2$ ) having a bit period such that an error created by said skewing occurs during said compensating bits (col. 9, line 63-col. 10, line 1; both compensating bit periods

(segments  $n$  and  $n+2$ ) have errors (increase display times) caused by the skewing).

In regards to claim 12, Hewlett discloses (Figures 9a and 9b) the display of claim 11 in which said bit period of a first of said at least two compensating bit periods is shortened and said bit period of a second of said at least two compensating bit periods is lengthened (Figures 9a and 9b; as can be seen from the drawings, first compensating bit period (segment  $n$ ) is shortened) and said bit period of a second of said at least two compensating bit periods is lengthened (Figures 9a and 9b; as can be seen from the drawings, second compensating bit period (segment  $n+2$ ) is lengthened).

In regards to claim 13, Hewlett discloses the display of claim 11 in which said bit period of a first of said at least two compensating bit periods is lengthened (Figures 9a and 9b; as can be seen from the drawings, first compensating bit period (segment  $n$ ) is lengthened) and said bit period of a second of said at least two compensating bit periods is shortened (Figures 9a and 9b; as can be seen from the drawings, first compensating bit period (segment  $n+2$ ) is shortened).

In regards to claim 14, Hewlett discloses the display of claim 11 in which a first and a second of said at least two compensating bit periods are segments of the same image bit (col. 10, lines 1-3; since the compensating bits (segments  $n$  and  $n+2$ ) can be of the same bit-plane, they would be part of the same image bit).

In regards to claim 15, Hewlett discloses the display of claim 11 in which said bit periods of a first and a second of said at least two compensating bit periods are temporally adjacent said at least one conflict bit period (Figure 9b; as can be seen from

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the drawing, the compensating bit periods (segments  $n$  and  $n+2$ ) are temporally adjacent to the conflict bit period (segment  $n+1$ )).

In regards to claim 16, Hewlett discloses the display of claim 11 in which said bit periods of a first and a second of said at least two compensating bit periods are temporally adjacent a combination of said at least one conflict bit period and at least one other bit period (Figure 9b; as can be seen from the drawing, there could exist bit periods (segments  $n-1$  and  $n+3$ ) prior to first compensating bit period (segment  $n$ ) and after second compensating bit period (segment  $n+2$ ), therefore compensating bit periods ( $n$  and  $n+2$ ) would be temporally adjacent to a combination of a conflict bit period (segment  $n+1$ ) and one other bit period (segments  $n-1$  and  $n+3$ )).

In regards to claim 17, Hewlett discloses the display of claim 11 in which said bit period of a first of said at least two compensating bit periods occurs prior to said at least one conflict bit period (Figure 9b; as can be seen from the drawing, the compensating bit period (segment  $n$ ) is before the conflicting bit period (segment  $n$ )) and a second of said at least two compensating bit periods occurs following said at least one conflict bit period (Figure 9b; as can be seen from the drawing, the compensating bit period (segment  $n+2$ ) is after conflicting bit period (segment  $n+1$ )).

In regards to claim 18, Hewlett discloses the display of claim 17 in which said first compensating bit period corresponds to a first image bit and a second compensating bit period corresponds to a second image bit (col. 10, lines 3-5; since compensating bit periods (segments  $n$  and  $n+2$ ) can be of different bit planes, then the first compensating



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bit period (segment  $n$ ) would correspond to a first image bit and the second compensating bit period (segment  $n+2$ ) would correspond to a second image bit).

In regards to claim 19, Hewlett discloses the display of claim 18 comprising displaying another bit segment corresponding to said first image bit and another bit segment corresponding to said second image bit in said sequence of bit display periods such that said two another bit segments compensate for said error created by said skewing (col. 10, lines 3-10; there is a counterskew, which compensates for the error created by the skew, that is accomplished skewing the boundaries of intervening segments if there are any).

In regards to claim 20, Hewlett discloses the display of claim 19 displaying at least one other image bit between said another bit segment corresponding to said first image bit and said another bit corresponding to said second image bit (col. 10, lines 3-10; since there can be more than one intervening segment between compensating bit periods (segments  $n$  and  $n+2$ ), there could be another bit segment for first image bit followed by one other bit image followed by another bit segment for second image bit).

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art (Hewlett et al US 2002/0130980) is deemed relevant since it discusses compensating for skew.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pervan whose telephone number is (571) 272-0910. The examiner can normally be reached on Monday - Friday between 8am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MVP

July 21, 2006

AMR A. AWAD  
PRIMARY EXAMINER  
